

1 Amendment to the Claims

2 In the Claims:

3 Please amend Claims 1, 14, 21, 29, and 35 as follows:

4 1. (Currently Amended) A method for determining one or more performance metrics for a  
5 distributed application in which distributed application data are transferred from a first site to a  
6 second site over a network, comprising the steps of:

7 (a) enabling a user to transmit a request for the distributed application data desired  
8 by the user, said request being transmitted from the second site to the first site over the network;

9 (b) in response to the request, transmitting the distributed application data from the  
10 first site to the second site over the network, if the distributed application data are not already  
11 accessible at the second site;

12 (c) appending machine instructions that define a performance monitoring function  
13 to the distributed application data that were requested and transmitted over the network to the second  
14 site as one data file; and

15 (d) executing the machine instructions at the second site, to implement the  
16 performance monitoring function ~~and~~ used to determine the one or more performance metrics for the  
17 distributed application without using the performance monitoring function to request any distributed  
18 application data from any site, at least one performance metric being determined in connection with  
19 timing of events occurring during the transmission of the distributed application data to the second  
20 site.

21 2. (Original) The method of Claim 1, wherein the performance monitoring function at the  
22 second site is initiated after the distributed application data are accessed at the second site.

23 3. (Original) The method of Claim 1, further comprising the step of collecting the one or  
24 more performance metrics for the distributed application over the network.

25 4. (Previously Presented) The method of Claim 3, wherein the step of collecting the  
26 performance metrics includes the step of applying a probabilistic sampling parameter to determine  
27 whether performance metrics are collected from each of a plurality of sites.

28 5. (Original) The method of Claim 4, wherein the probabilistic sampling parameter is applied  
29 on a per-site basis.

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1           6. (Original) The method of Claim 4, wherein the probabilistic sampling parameter is applied  
2 on a per-request basis.

3           7. (Original) The method of Claim 1, wherein the performance monitoring function at the  
4 second site determines one or more of:

5                   (a)     a fetch latency, corresponding to a time period required to fetch the distributed  
6 application data from the first site over the network;

7                   (b)     a render latency, corresponding to a time period required to fetch and display  
8 the distributed application data at the second site;

9                   (c)     a dwell latency, corresponding to a time period exhibited by a user requesting  
10 the distributed application data, before requesting other distributed application data;

11                  (d)     a per-image fetch latency, corresponding to a time period for fetching a  
12 specific image referenced in the distributed application data;

13                  (e)     an image arrival time, corresponding to a time at which a specific image,  
14 loaded as a part of accessing the distributed application data, arrives at the second site;

15                  (f)     a navigation status, corresponding to an event that brought a user to the  
16 distributed application data;

17                  (g)     a cache status, corresponding to a determination of whether the distributed  
18 application data was cached at the second site;

19                  (h)     a window resize event, corresponding to a determination of whether the user  
20 resized a window in which the distributed application data are accessed;

21                  (i)     a page stop event, corresponding to a determination of whether the user  
22 aborted loading the distributed application data;

23                  (j)     an image error event, corresponding to a determination of whether an error  
24 occurred while loading an image referenced in the distributed application data; and

25                  (k)     a JavaScript error event, corresponding to a determination of whether an error  
26 occurred during interpretation of JavaScript included in the distributed application data.

27           8. (Original) The method of Claim 3, further comprising the step of determining whether to  
28 collect a performance metric from the second site as a function of a specific performance metric that  
29 was determined at the second site.

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1           9. (Original) The method of Claim 1, further comprising the step of determining whether the  
2 distributed application data are already cached at the second site or must be transferred from the first  
3 site, before determining a performance metric.

4           10. (Original) The method of Claim 1, wherein the distributed application data have a  
5 markup language format.

6           11. (Original) The method of Claim 1, further comprising the steps of determining a  
7 performance metric at the first site; and combining the performance metric determined at the second  
8 site with a performance metric determined at the first site to determine a correlated performance  
9 metric.

10           12. (Previously Presented) The method of Claim 1, wherein said one or more performance  
11 metrics is determined without any apparent effect on the access of the distributed application data at  
12 the second site.

13           13. (Previously Presented) A machine-readable medium on which are stored machine  
14 instructions for appending to distributed application data that are transferred from one site to another  
15 as one data file, said machine instructions causing:

16               (a) a performance monitoring function to be implemented when the distributed  
17 application data and the machine instructions comprising the one data file are accessed; and

18               (b) the performance monitoring function to determine one or more performance  
19 metrics for a distributed application in which the distributed application data are transferred between  
20 sites and accessed at one of the sites, without using the performance monitoring function to request  
21 any distributed application data from any site, at least one performance metric being determined in  
22 connection with timing of events occurring during the transmission of the distributed application data  
23 to the site receiving the distributed application data.

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1           14. (Currently Amended) A system for determining one or more performance metrics for a  
2 distributed application in which distributed application data are transferred from a first site to a  
3 second site over a network, comprising:

4                   (a)     a memory;  
5                   (b)     a display;  
6                   (c)     a network interface; and  
7                   (d)     a processing device that is coupled to the memory, the display, and the network  
8 interface, said network interface being adapted to enable communication over the network, wherein at  
9 the second site, the processing device causes a request for the distributed application data to be  
10 transmitted over the network through the network interface to the first site, said processing device at  
11 the first site responding by transmitting the distributed application data appended with machine  
12 instructions as one data file that cause the processing device at the second site to perform a  
13 performance monitoring function defined by the appended machine instructions such that when  
14 executed by said processing device as the distributed application data are accessed at the second site,  
15 said performance monitoring function determining said at least one performance metric and being  
16 implemented without requiring any affirmative action by a user of the processing device and without  
17 using the performance monitoring function to request any distributed application data from any other  
18 site.

19           15. (Original) The system of Claim 14, wherein the machine instructions cause the  
20 processing device at the second site to transmit said at least one performance metric over the network  
21 to a data center serving as a collection site for performance metrics.

22           16. (Original) The system of Claim 15, wherein a probabilistic sampling parameter is applied  
23 to determine whether the performance metric is collected at the data center.

24           17. (Original) The system of Claim 16, wherein the probabilistic sampling parameter is  
25 applied on a per-site basis.

26           18. (Original) The system of Claim 16, wherein the probabilistic sampling parameter is  
27 applied on a per-request basis.

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1           19. (Original) The system of Claim 14, wherein the machine instructions executed by the  
2 processing device at the second site cause a determination of one or more of:

3                   (a) a fetch latency, corresponding to a time period required to fetch the distributed  
4 application data from the first site over the network;

5                   (b) a render latency, corresponding to a time period required to fetch and render all  
6 contents of the distributed application data on the display at the second site;

7                   (c) a dwell latency, corresponding to a time period exhibited by a user requesting  
8 the distributed application data, before requesting other distributed application data;

9                   (d) a per-image fetch latency, corresponding to a time period for fetching a  
10 specific image referenced in the distributed application data;

11                   (e) an image arrival time, corresponding to a time at which a specific image,  
12 loaded as a part of accessing the distribution application data, arrives at the second site;

13                   (f) a navigation status, corresponding to an event that brought a user to the  
14 distributed application data;

15                   (g) a cache status, corresponding to a determination of whether the distributed  
16 application data was already cached in the memory at the second site;

17                   (h) a window resize event, corresponding to a determination of whether the user  
18 resized a window in which the distributed application data accessed are rendered on the display at the  
19 second site;

20                   (i) a page stop event, corresponding to a determination of whether the user  
21 aborted loading the distributed application data from the first site;

22                   (j) an image error event, corresponding to a determination of whether an error  
23 occurred while loading an image referenced in the distributed application data; and

24                   (k) a JavaScript error event, corresponding to a determination of whether an error  
25 occurred during interpretation of JavaScript included in the distributed application data.

26           20. (Original) The system of Claim 14, wherein the machine instructions cause the  
27 processing device at the second site to determine whether the distributed application data are cached  
28 at the second site or must be transferred from the first site, before determining said one or more  
29 performance metrics.

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1           21. (Currently Amended) A method for determining and collecting at least one performance  
2 metric related to access of a Web page by a browser program on a client device, including at least one  
3 of a compound performance metric and a correlated performance for a network, comprising the steps  
4 of:

5                   (a)     enabling a user to request transfer of the Web page from a server device to the  
6 client device over a network;

7                   (b)     appending machine instructions to the Web page so that the Web page and  
8 machine instructions are transferred to the client device as one data file;

9                   (c)     when the Web page is loaded by the client device for rendering by the browser  
10 program, causing the client device to execute the machine instructions that define how to carry out a  
11 carry out the browser monitoring function, said browser monitoring function being implemented  
12 without requiring any affirmative action by a user of the client device;

13                  (d)     determining said at least one performance metric on the client device with the  
14 browser monitoring function without using the browser monitoring function to request any Web page  
15 from any site, at least one performance metric being determined in connection with timing of events  
16 occurring during the transmission of the distributed application data to the client device; and

17                  (e)     if a correlated performance metric is to be determined:

18                           (i)     determining a server performance metric; and

19                           (ii)    combining the server performance metric with said at least one  
20 performance metric to determine the correlated performance metric.

21           22. (Original) The method of Claim 21, further comprising the step of transmitting said at  
22 least one performance metric from the client device to a remote site over the network.

23           23. (Original) The method of Claim 22, wherein the remote site comprises a data center,  
24 further comprising the step of analyzing said at least one performance metric to determine  
25 performance data for the Web page, including the correlated performance metric.

26           24. (Previously Presented) The method of Claim 23, further comprising the step of enabling  
27 a determination to be made of whether said at least one performance metric will be accepted for  
28 processing by the data center, based upon a probabilistic sampling parameter.

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1           25. (Original) The method of Claim 24, wherein the probabilistic sampling parameter is  
2 applied on a per-user basis to determine if said at least one performance metric will be accepted by  
3 the data center.

4           26. (Original) The method of Claim 24, wherein the probabilistic sampling parameter is  
5 applied on a per-Web page basis to determine if said at least one performance metric will be accepted  
6 by the data center.

7           27. (Previously Presented) The method of Claim 23, wherein a plurality of different kinds of  
8 performance metrics can be determined by the browser monitoring function, further comprising the  
9 step of enabling the data center to selectively accept a performance metric as a function of the kind of  
10 performance metric being transmitted to the data center.

11           28. (Original) The method of Claim 21, wherein the step of determining said at least one  
12 performance metric is done without the client device providing any indication to the user of the client  
13 device that said at least one performance metric is being determined.

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1           29. (Currently Amended) The method of Claim 21, wherein when determining said at least  
2 one performance metric, the client device determines one or more of:

3                   (a) a fetch latency, corresponding to a time period required to fetch a base Web  
4 page document from a server over the network;

5                   (b) a render latency, corresponding to a time period required to fetch and display  
6 all contents referenced within an ~~Hypertext~~ Hypertext Markup Language (HTML) document on the  
7 client device;

8                   (c) a dwell latency, corresponding to a time period exhibited by the user viewing  
9 the Web page, before navigating to a different Web page with the browser program;

10                  (d) a per-image fetch latency, corresponding to a time period for fetching a  
11 specific image referenced in the Web page;

12                  (e) an image arrival time, corresponding to a time at which a specific image,  
13 loaded as a part of rendering the Web page, arrives on the browser;

14                  (f) a navigation status, corresponding to an event that brought the user to the Web  
15 page;

16                  (g) a cache status, corresponding to a determination of whether the Web page was  
17 cached by the browser program or by a proxy;

18                  (h) a window resize event, corresponding to a determination of whether the user  
19 resized a window in which the Web page is rendered;

20                  (i) a page stop event, corresponding to a determination of whether the user  
21 aborted loading of the Web page;

22                  (j) an image error event, corresponding to a determination of whether an error  
23 occurred while loading an image included in the Web page; and

24                  (k) a JavaScript error event, corresponding to a determination of whether an error  
25 occurred during interpretation of JavaScript included in the Web page.

26           30. (Original) The method of Claim 21, further comprising the step of determining whether  
27 the Web page was previously cached by the client device.

28           31. (Original) The method of Claim 21, wherein said at least one performance metric  
29 comprises a performance metric for each image included in the Web page.

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1           32. (Original) The method of Claim 21, further comprising the steps of:

2               (a)     including a monitor cookie with the Web page that is transferred to the client  
3 device from the server device and indicates that the Web page is a monitored document;

4               (b)     detecting the monitor cookie when the Web page is transferred to the client  
5 device; and

6               (c)     causing the browser monitor function to determine that said at least one  
7 performance metric is to be determined for the Web page in response to the monitor cookie being  
8 detected.

9           33. (Original) The method of Claim 21, further comprising the steps of:

10              (a)     executing a server monitoring function on a server device that is transferring  
11 the Web page to the client device;

12              (b)     determining the server performance metric related to the transfer of the Web  
13 page to the client device from the server device with the server monitoring function; and

14              (c)     transmitting said server performance metric to a remote site for combination  
15 with said at least one performance metric determined by the browser monitoring function on the  
16 client device, to determine the correlated performance of the network.

17           34. (Original) The method of Claim 21, wherein the step of combining said at least one  
18 performance metric determined by the browser monitoring function with the server performance  
19 metric determined by the server monitoring function determine a network latency.

20           35. (Currently Amended) A memory medium on which are stored machine readable  
21 instructions that define a browser monitoring function, which when executed by a client computing  
22 device, cause the client computing device to ~~carry out a~~ carry out the browser monitoring function,  
23 said browser monitoring function being implemented without requiring any affirmative action by a  
24 user of the client computing device and being used for determining at least one performance metric  
25 on the client computing device with the browser monitoring function, said at least one performance  
26 metric being related to access of a Web page by a browser program executed on the client computing  
27 device and enabling at least one of a compound performance metric and a correlated performance  
28 metric to be determined, neither the compound performance metric nor the correlated performance  
29 metric being determined using the browser monitoring function to request any Web page from any  
30 site.

1           36. (Original) The memory medium of Claim 35, wherein the machine readable instructions  
2 cause said at least one performance metric to be transmitted to a remote site over a network for  
3 determination of the correlated performance metric.

4           37. (Original) The memory medium of Claim 35, wherein said at least one performance  
5 metric is determined without the client device providing any indication to a user of the client device  
6 that said at least one performance metric is being determined.

7           38. (Original) The memory medium of Claim 35, wherein the machine readable instructions  
8 determine one or more of the following performance metrics:

9                   (a) a fetch latency, corresponding to a time period required to fetch a base Web  
10 page document from a server over the network;

11                   (b) a render latency, corresponding to a time period required to fetch and display  
12 all contents referenced within an HTML document on the client device;

13                   (c) a dwell latency, corresponding to a time period exhibited by the user viewing  
14 the Web page, before navigating to a different Web page with the browser program;

15                   (d) a per-image fetch latency, corresponding to a time period for fetching a  
16 specific image referenced in the Web page;

17                   (e) an image arrival time, corresponding to a time at which a specific image,  
18 loaded as a part of rendering the Web page, arrives on the browser;

19                   (f) a navigation status, corresponding to an event that brought the user to the Web  
20 page;

21                   (g) a cache status, corresponding to a determination of whether the Web page was  
22 cached by the browser program or by a proxy;

23                   (h) a window resize event, corresponding to a determination of whether the user  
24 resized a window in which the Web page is rendered;

25                   (i) a page stop event, corresponding to a determination of whether the user  
26 aborted loading of the Web page;

27                   (j) an image error event, corresponding to a determination of whether an error  
28 occurred while loading an image included in the Web page; and

29                   (k) a JavaScript error event, corresponding to a determination of whether an error  
30 occurred during interpretation of JavaScript included in the Web page.

1           39. (Original) The memory medium of Claim 35, wherein the machine readable instructions  
2 cause the client computing device to determine whether the Web page was previously cached by the  
3 client computing device.

4           40. (Original) The memory medium of Claim 35, wherein said at least one performance  
5 metric includes a performance metric for each image in the Web page.

6           41. (Original) The memory medium of Claim 35, wherein the machine readable instructions  
7 cause the client computing device to:

8                   (a) detect whether a monitor cookie is included with the Web page that is  
9 transferred to the client computing device, said monitor cookie indicating that the Web page is a  
10 monitored document; and

11                   (b) cause the browser monitor function to determine that said at least one  
12 performance metric is to be determined for the Web page in response to the monitor cookie being  
13 detected.

14           42. (Previously Presented) A system for determining and collecting at least one performance  
15 metric related to access of a Web page by a browser program, comprising:

16                   (a) a memory;

17                   (b) a display;

18                   (c) a network interface; and

19                   (d) a processing device that is coupled to the memory, the display, and the network  
20 interface, said network interface being adapted to couple to a remote storage at a server to retrieve the  
21 Web page, said Web page including machine instructions that perform a browser monitoring function  
22 and which are executed by the processing device when the Web page is loaded by the processing  
23 device for rendering in the display, said browser monitoring function determining said at least one  
24 performance metric and being implemented without requiring any affirmative action by a user of the  
25 processing device and without using the browser monitoring function to request any further download  
26 from any site, said at least one performance metric including at least one of compound performance  
27 metric and a correlated performance metric.

28           43. (Original) The system of Claim 42, wherein the machine instructions further cause the  
29 processing device to transmit said at least one performance metric from the processing device to a  
30 remote site over a network through the network interface.

1           44. (Original) The system of Claim 43, further comprising a computing device disposed  
2 remotely at a data center, said computing device receiving and analyzing said at least one  
3 performance metric to determine performance data for the Web page, said performance data  
4 including the correlated performance metric for the network.

5           45. (Original) The system of Claim 44, wherein a determination of whether said at least one  
6 performance metric will be accepted for processing by the data center is based upon a probabilistic  
7 sampling parameter, ensuring that performance metrics transmitted to the data center are randomly  
8 sampled.

9           46. (Original) The system of Claim 45, wherein the probabilistic sampling parameter is  
10 applied on a per-user basis to determine if said at least one performance metric is accepted for  
11 processing by the data center.

12           47. (Original) The system of Claim 45, wherein the probabilistic sampling parameter is  
13 applied on a per-Web page basis to determine if said at least one performance metric will be accepted  
14 for processing by the data center.

15           48. (Original) The system of Claim 44, wherein a plurality of different kinds of performance  
16 metrics can be determined by the browser monitoring function, and wherein the data center  
17 selectively accepts said at least one performance metric, based upon a specific kind of performance  
18 metric that is being transmitted to it for processing.

19           49. (Original) The system of Claim 42, wherein said at least one performance metric is  
20 determined by the processing device without providing any indication to a user of the processing  
21 device that said at least one performance metric is being determined.

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1           50. (Original) The system of Claim 42, wherein said at least one performance metric  
2 includes one or more of:

3                   (a) a fetch latency, corresponding to a time period required to fetch a base Web  
4 page document over the network;

5                   (b) a render latency, corresponding to a time period required to fetch and render all  
6 contents of the Web page on the display;

7                   (c) a dwell latency, corresponding to a time period exhibited by a user viewing the  
8 Web page, before navigating to a different Web page;

9                   (d) a per-image fetch latency, corresponding to a time period for fetching a  
10 specific image referenced in the Web page;

11                   (e) an image arrival time, corresponding to a time at which a specific image,  
12 loaded as a part of rendering the Web page, arrives for rendering on the display;

13                   (f) a navigation status, corresponding to an event that brought a user to the Web  
14 page;

15                   (g) a cache status, corresponding to a determination of whether the Web page was  
16 cached in the memory by a browser program or by a proxy;

17                   (h) a window resize event, corresponding to a determination of whether a user  
18 resized a window in which the Web page is rendered on the display;

19                   (i) a page stop event, corresponding to a determination of whether a user aborted  
20 loading of the Web page;

21                   (j) an image error event, corresponding to a determination of whether an error  
22 occurred while loading an image included in the Web page; and

23                   (k) a JavaScript error event, corresponding to a determination of whether an error  
24 occurred during interpretation of JavaScript included in the Web page.

25           51. (Original) The system of Claim 42, wherein the machine instructions further cause the  
26 processing device to determine if the Web page was previously cached in the memory by the  
27 processing device, before determining said at least one performance metric.

28           52. (Original) The system of Claim 42, wherein said at least one performance metric  
29 comprises a performance metric for each image included in the Web page.

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1           53. (Original) The system of Claim 42, wherein the machine instructions further cause the  
2 processing device to:

3                 (a)     detect whether a monitor cookie is included with the Web page, said monitor  
4 cookie indicating that the Web page is a monitored document; and

5                 (b)     cause the processing device to determine that said at least one performance  
6 metric is to be determined for the Web page in response to the monitor cookie being detected.

7           54. (Original) The system of Claim 44, further comprising:

8                 (a)     a server computing device that is remote from the processing device and  
9 coupled in communication with the processing device and with the data center over a network  
10 through the network interface, said server computing device executing a server monitoring function  
11 in regard to transferring the Web page to the processing device over the network;

12                (b)     said server computing device determining a server performance metric related  
13 to the transfer of the Web page to the processing device from the server computing device; and

14                (c)     said server computing device transmitting said server performance metric to  
15 the data center site for processing.

16           55. (Original) The system of Claim 54, wherein the data center combines a performance  
17 metric determined by the browser monitoring function executed by the processing device with the  
18 server performance metric determined by the server computing function to determine the correlated  
19 performance metric.

20           56. (Original) The system of Claim 54, further comprising a caching proxy disposed between  
21 the server computing device and the processing device, said caching proxy executing a caching proxy  
22 monitoring function that determines at least one performance metric related to a performance of the  
23 caching proxy.

24           57 – 61. (Canceled)